

REMARKS

Claims 1-18 are pending for further examination. Claims 1, 6, 8, 10 and 15 have been amended. Applicants respectfully requests entry of these amendments.

Claims 1-3, 5, 10-12 and 14 are rejected under 35 U.S.C. § 102(b) as anticipated by European Patent Application EP 1054524 (Kubo et al.).

Claims 4 and 13 are rejected under 35 U.S.C. § 103(a) as unpatentable over EP 1054524 in view of U.S. Patent Publication 2003/016129 (Frascolla et al.).

Claims 6-9 and 15-18 are rejected under 35 U.S.C. § 103(a) as unpatentable over the Frascolla et al. patent application and EP 1054524.

Applicants respectfully request reconsideration.

Claims 1, 6 and 8 have been amended to further clarify the subject matter and to use more idiomatic English.

Claim 10 has been amended and now recites “the transmitter switching unit and the receiver switching unit are designed to switch signals in specified working channels to specified protection channels or switch signals in specified protection channels back to specified working channels according to switching requests from the WDM system.” Support for this amendment can be found, for example, on page 8 paragraphs 23 and 25.

Claim 15 has been amended and now recites “switching, by the transmitter switching unit or/and the receiver switching unit, the signal in the working channel to a protection channel or switching the signal in the protection channel back to a working channel according to the switching requests from the WDM system.” Support for this amendment can be found, for example, on page 8 paragraph 25.

Claim 1 recites a WDM layer-based optical channel protection device that capable of signal transmission through and routing between working channels and protection channels to/from a WDM system. The WDM layer-based optical channel protection device provides

independent protection for the WDM layer with reduced initial cost of equipment and reduced waste of wavelength resources.

In particular, Claim 1 recites “a switching device designed to switch signals in specified working channels to specified protection channels and to switch signals in specified protection channels to specified working channels according to switching requests from the WDM system.” In contrast, EP 1054524 does not disclose that the switching units 28a and 28b switch signals from the operating optical terminal units 21a-24a to the standby optical terminal units 25a and 25b or from the standby optical terminal units 25a and 25b to the operating optical terminal units 21a-24a according to switching requests from a WDM system. Instead, EP 1054524 discloses that the optical terminal unit 21a-24a and 21b-24b and the standby optical terminal units 25a and 25b each monitor the frame alignment or the transmission line to determine if the signal is to be switched (*see* paragraph 33 and 34 and FIG. 3 ST3 and ST4). Therefore, EP 1054524 does not disclose that the switching units 28a and 28b switch signals from the operating optical terminal units 21a-24a and 21b-24b to the standby optical terminal units 25a and 25b or from the standby optical terminal units 25a and 25b to the operating optical terminal units 21a-24a and 21b-24b according to switching requests from the WDM system.

In view of the foregoing remarks, Applicants respectfully request withdrawal of the rejection of claim 1.

For similar reasons, Applicants respectfully request withdrawal of the rejection of claim 10.

Claim 6 recites a method that includes monitoring the quality of signals in each channel and routing state of transmitting and receiving modules. The monitoring step is performed by the WDM system. Therefore, the method can be implemented such that the WDM layer-based OChP does not require additional monitoring devices. In contrast, the Frascolla et al. application does not disclose or suggest the claimed feature. Instead, the Frascolla et al. application discloses that monitoring is performed by the optical failure detectors PD and DECT which detect failures in the optical transmission system. The optical failure detectors PD and

DECT are provided in the switching section 6 of stations 2 and 3 as additional monitoring devices.

Claim 6 also recites that the WDM determines whether some signals in the working channels are to be switched to the protection channels and that the transmitting module and the receiving module perform the switching according to the switching requests from the WDM system. In contrast, the Frascolla et al. application does not disclose or suggest these features. Instead, the Frascolla application discloses that the traffic in station 2 or 3 is readdressed upon a failure of the working path S1 as detected by the optical failure detector PD or DECT in the switching section 6 (*see* paragraph 200). Therefore, the Frascolla et al. application does not disclose that the WDM determines whether some signals in the working channels are to be switched to the protection channels and that the transmitting module and the receiving module perform the switching according to the switching requests from the WDM system. In addition, EP 1054524 does not disclose or suggest this feature.

In view of the foregoing remarks, Applicants respectfully request withdrawal of the rejection of claim 6.

For similar reasons, Applicants respectfully request withdrawal of the rejection of claim 15.

The dependent claims should be patentable at least for the reasons discussed above with respect to claims 1, 6, 10 and 15. Furthermore, the dependent claims recite additional features that make those claims independently patentable.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this

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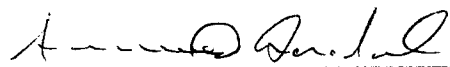
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paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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